

## CLAIMS

1. A method for bactericidal treatment of bulk food storage containers for fresh produce, the method including the step of treating a container with electrochemically activated, bactericidal aqueous solution.
2. Fresh produce, characterised in that it has been treated with electrochemically activated, bactericidal aqueous solution during storage in a bulk food storage container.
3. A bulk food storage facility, including a bulk food storage container for fresh produce, the facility being characterised in that it includes means for producing electrochemically activated, bactericidal aqueous solution for treating an internal surface of the container.
4. A transporter, having a bulk food storage container for transporting fresh produce, the transporter being characterised in that it is provided with means for producing electrochemically activated, bactericidal aqueous solution.

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5. A method as claimed in claim 1, including the step of packing the fresh produce in ice in the container, the ice being characterised in that it was made from the electrochemically activated, bactericidal aqueous solution.
6. A bulk food storage facility as claimed in claim 3, characterised in being provided with means for producing the aqueous solution in iced form.
7. A method as claimed in claim 1, wherein the aqueous solution is selected from a group consisting of mixed oxidant, anion-containing solution and mixed reductant, cation-containing solution.
8. A method as claimed in claim 7 wherein the solution is produced from an about 3 to 10% aqueous salt solution, electrolysed to produce mixed reductant and mixed oxidant species.
9. A method as claimed in claim 8 wherein the salt solution is sodium chloride or potassium chloride solution.

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10. A method as claimed in claim 1 wherein the electrochemically activated, bactericidal aqueous solution is anion-containing solution is produced by an electrolysis device, having a through flow electrochemical cell with two co-axial cylindrical electrodes, with a co-axial diaphragm between the two electrodes so as to separate an annular inter-electrode space into a catalytic and an analytic chamber.
11. A method as claimed in claim 8 wherein the species are labile and wherein they, after about 96 hours, disappear with relatively no residues being produced.
12. A method as claimed in claim 7 wherein the anion-containing solution has a redox potential of between about +450 mV and +1200 mV and a pH of between about 2 and 9.
13. A method as claimed in claim 7 wherein the anion-containing solution includes mixed oxidant species selected from the group consisting of  $\text{ClO}$ ;  $\text{ClO}^-$ ;  $\text{HClO}$ ;  $\text{OH}^-$ ;  $\text{HO}_2^-$ ;  $\text{H}_2\text{O}_2$ ;  $\text{O}_3$ ;  $\text{S}_2\text{O}_8^{2-}$  and  $\text{Cl}_2\text{O}_6^{2-}$

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14. A method as claimed in claim 7 wherein the cation-containing solution has a pH of between about 7 and 13 and a redox potential of between about -200 mV and -900 mV.
15. A method as claimed in claim 7 wherein the cation-containing solution includes mixed reductant species selected from the group consisting of  $\text{OH}^-$ ;  $\text{H}_3^-$ ;  $\text{O}_2^-$ ;  $\text{H}_2^-$ ;  $\text{HO}_2^-$ ;  $\text{HO}_2^-$  and  $\text{O}_2^-$ .
16. A method as claimed in claim 1 wherein the physical characteristics of the anion-containing and the cation-containing solution are adjustable so as to be suitable for the particular application.

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